

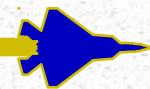
Revised USAF Chemical Warfare C



CMSgt Bert Cline



Overview



- **Background**
- **Critical Scientific/Analytic Revelations**
- **Probable Conops Differences/Expansion**
- **Status of AF CW Conops Development**
- **Challenges to Effective Implementation**



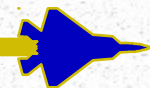
Background



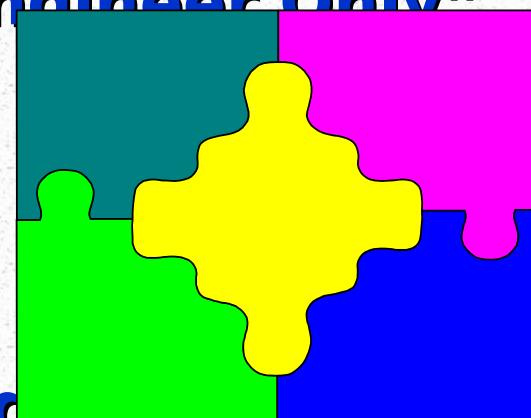
- **Status Quo Unacceptable**
 - **CORAL BREEZE & Other Exercises**
 - **DoD IG Reports**
 - **GAO Audits**
- **Primary Test and Analytical Agencies**
 - **West Desert Test Center (Dugway)**
 - **Defense Threat Reduction Agency**
 - **Armstrong Laboratories**



Background

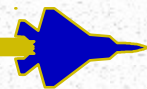


- **Development of AF CW Conops**
 - **DTRA Study Impetus for Effort**
 - **7AF/CC Tasked CE Through COMPACAF**
 - **“Take Advantage of all Available Science”**
 - **Scope Larger Than “Civil Engineer Only”**
 - **CSAF Supported Effort**
- **Effort Underway**
 - **Many Sections Completed**
 - **Scientific Review**
 - **Project Completion Goal: Jan 00**





Critical Scientific/Analytic Revelations

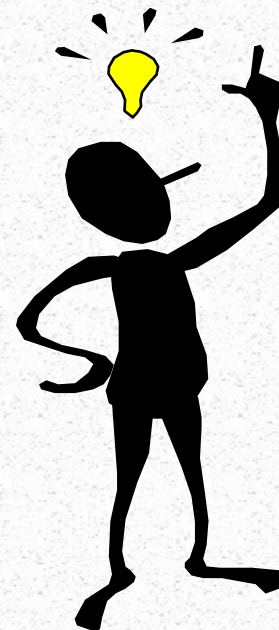


- **Inability of Enemy to “Attack at Will”**

- **Limited Number of Launchers**
- **Probable Attack & Re-Attack Scenario**

- **Interception Capability**

- **Missile Type**
- **Time Over Target**
- **Warhead Type**

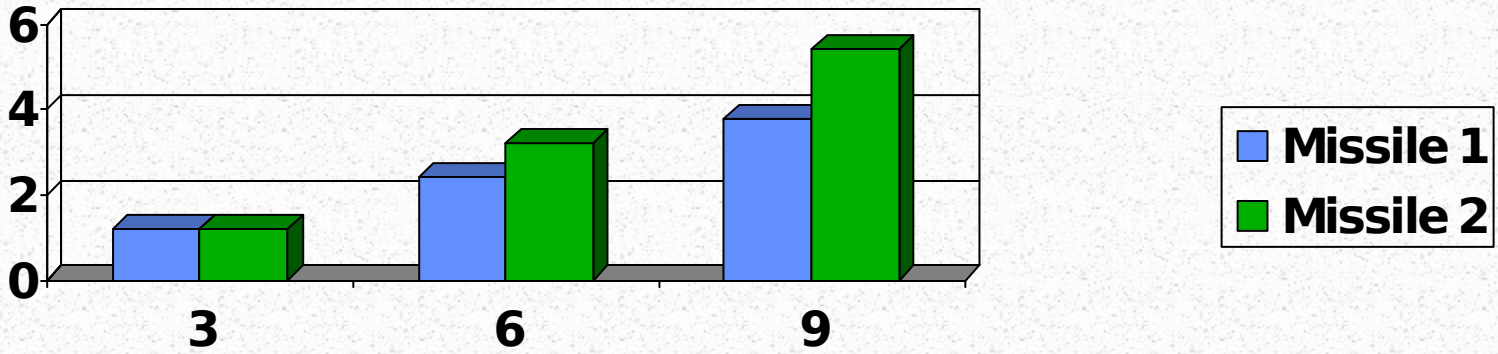




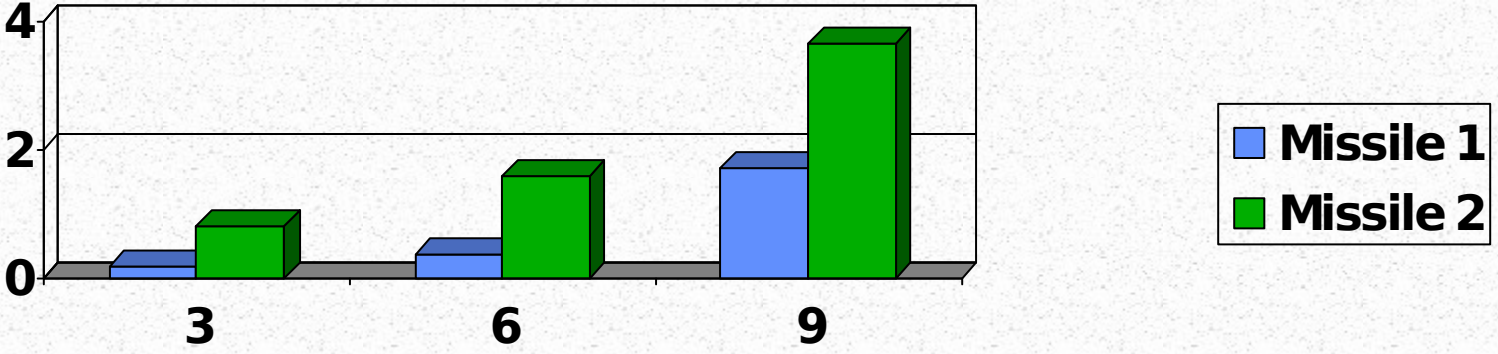
"Leakers" Associated With Large "Time Over Target"



Warhead #1



Warhead #2

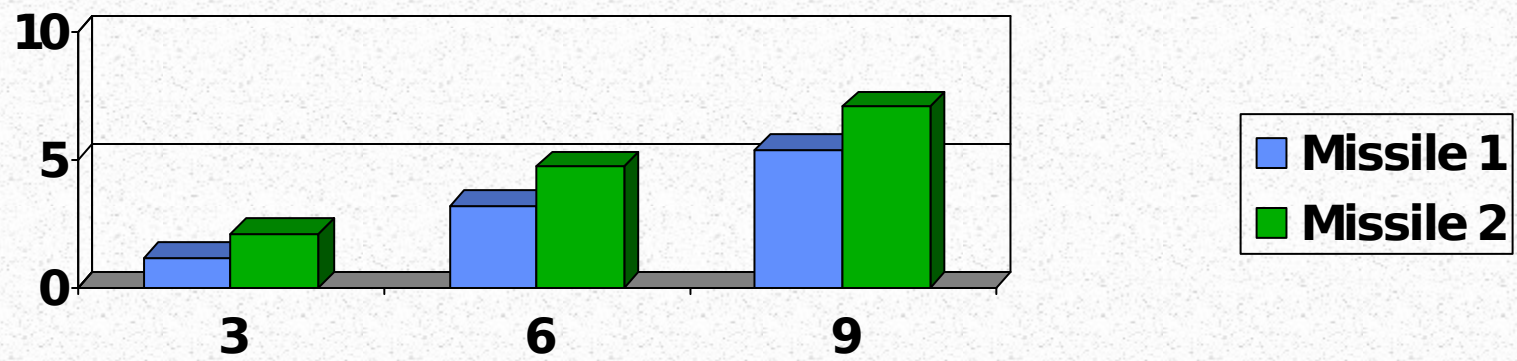




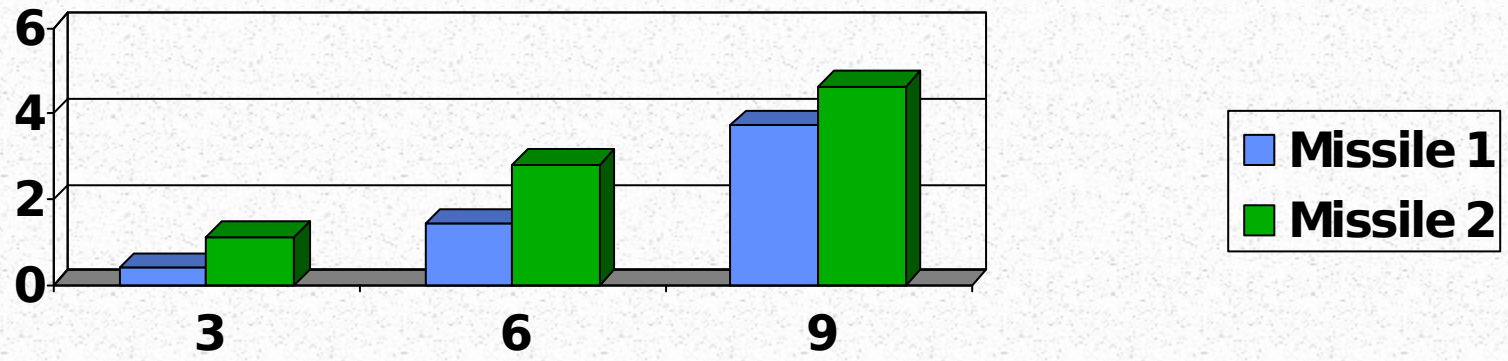
"Leakers" Associated With Short "Time Over Target"



Warhead #1



Warhead #2



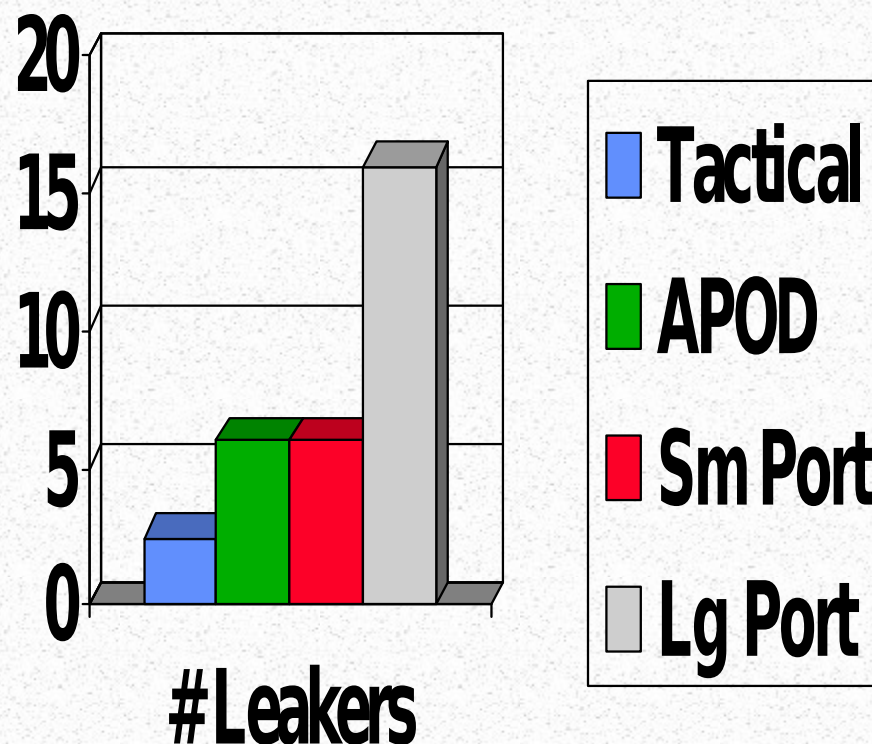


“Leakers” Required for Significant Contamination of Ops Surfaces



- **Factors Affecting Contaminated Area**

- **Missile Accuracy**
- **Size of Target Area**
- **Missile Payload**
- **Type Burst**
 - **Air Burst Produces Plots From 3 - 100 Times Larger**





Critical Scientific/Analytic Revelations



- **VX Primary Threat from Missile Air Burst**

- **Other Agents Won't Survive Release Stress**

- **Downwind Deposition**

- **Difference Between VX and Other Agents**

Agent	Contact/Pickup		
	Concrete & Asphalt	Metal & Plastic	Vapor Hazard
VX	<10 Minutes	Days to Weeks	Operationally Insignificant
GD		Hours	Hours
HD		(<4 hrs at 70 F)(12 hours at 70 F)	

• **70 to 122 Times More Toxic; Negligible Vapor**



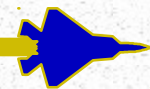
Critical Scientific/Analytic Revelations



- **Agent Droplets From 40 to 200 Microns**
 - **Previous Estimations From 400 to 900**
 - **Detector Sensitivities Become Issue**
 - **Automatic Liquid Agent Detector (ALAD)**
 - **M8 Paper**
 - **Spread Factor**
 - **Eye Limitations**
 - **Highly Questionable Reliability With VX**
 - **Types**
 - **Miosis in One Hour at 30 Degrees Celsius**
 - **Instruments Reading “0”**



Critical Scientific/Analytic Revelations



- **Chemical Cloud Deposition Delayed**
 - **First Drop 2 Minutes After Detonation**
 - **50% Deposited by 10 Minutes**
 - **Last Drop 60 Minutes After Detonation**
- **Absorption of Agent Within Minutes**
 - **M8 Paper Must Be Pre-Positioned**



M8 Paper and Sand/Rock

After Agent Deposition





M8 Paper and Grass After Agent Deposition





Probable Conops Differences/Expansion



- **Individual Protective Equipment Rqmts**

- **Assessment of “Reuse & Use”**
- **IPE Requirements**
 - **Agent**
 - **Concentration**
 - **“Working” Surface**
 - **Acceptable Risk**
- **Restriction of M9 Paper Use**



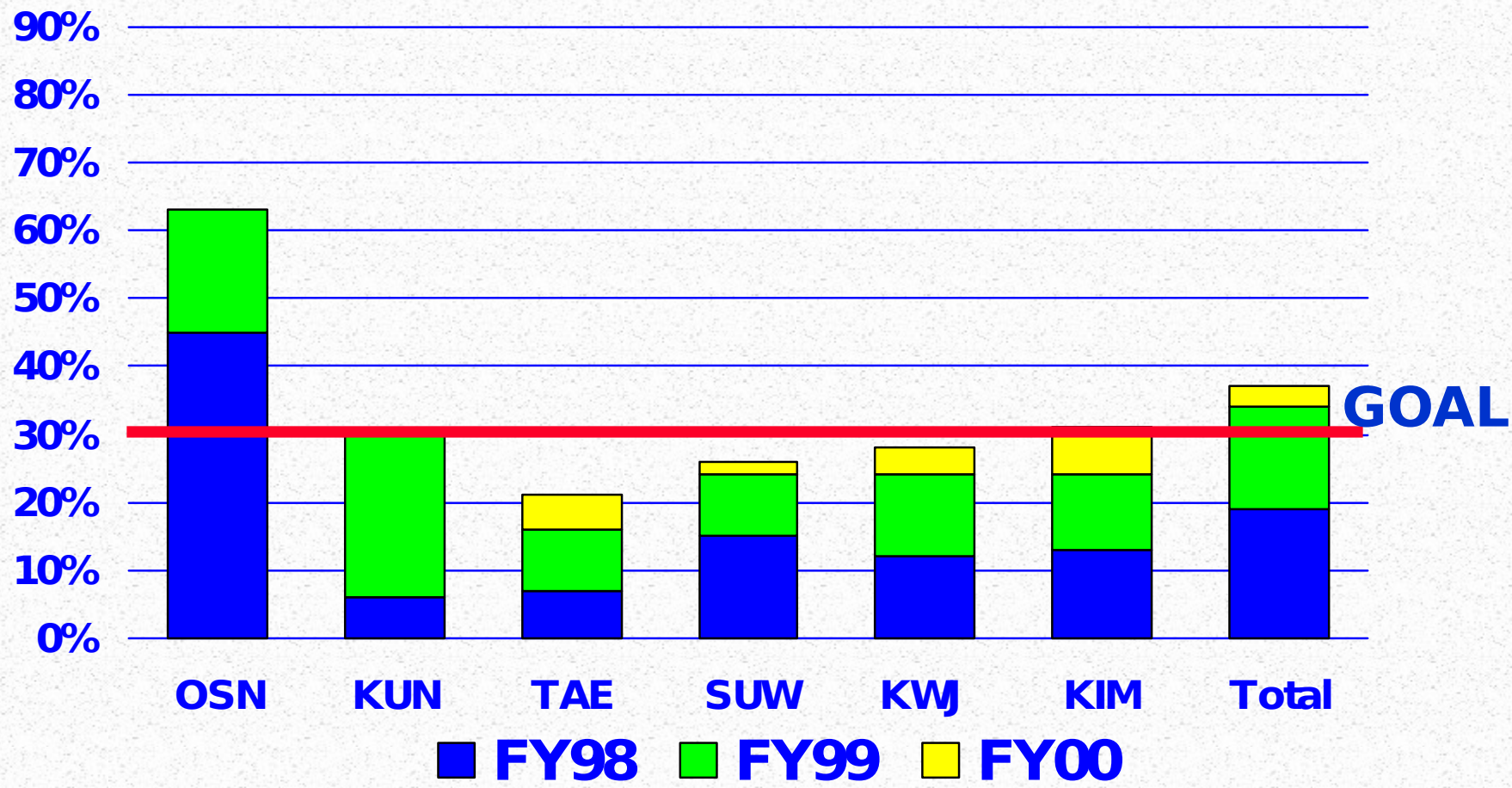
- **Personnel Sheltering**



CP PROJECTION



Based on Proposed CP Spend Plan and Two 12 Hour Shifts





Probable Conops Differences/Expansion

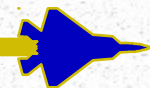


- **Pre-Attack Actions**

- **Measurable Vulnerability Assessments**
- **Time Phased Preparation Activities**
- **Specified Use of “Sectors”**
- **Revision of NBC Detection Concepts**
 - **Recommended Detector Distribution**
 - **Removal of ALAD from Inventory**
 - **Specified “Tie Ins” w/Air Defense Network**
- **Use of VLS-TRACK as Primary Plotting Tool**
 - **Preparation of Specified Overlays**



Probable Conops Differences/Expansion



- **Trans & Post-Attack Actions**

- **Base Populace Response**

- **“Button Up” Versus Run**
 - **Delayed Movement After Attack**
 - **Completion of Immediate & Operational Decon**
 - **Identification & Marking of Contaminated Assets**
 - **Don't D**



ours in VX Area



Probable Conops Differences/Expansion



- **Post-Attack Actions**
 - **Specified Use of Split MOPP**
 - **Sector Chief's Authorized to Declare MOPP**
 - **Use of Specific Tools**
 - **Quantifying High Vapor Hazard**
 - **Delineation of "Unmeasurable" Hazard Zone**
 - **Chemical Persistency Calculations**
 - **Samples for "Gold Standard" Testing**



Probable Conops Differences/Expansion



- **Post-Attack Actions**
 - **NBC Plotting and Reporting**
 - **Specified Default and Hazard Prediction Values**
 - **Use of Weather Info (Local versus CDM)**
 - **Chemical Exposure Control System**
 - **Personnel & Equip Vulnerability Matrix**
 - **Personnel Accountability**
 - **Decontamination Operations**
 - **Focus on “Operational” versus “Reconstitution”**
 - **Creation of Standards**



Probable Conops Differences/Expansion

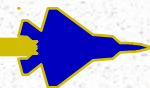


- **NEO Operations in a CW Environment**
 - **Protection and Movement of People**
- **Revisions to Inspector General Process**
 - **Scenario Preparation for Wartime Inspection**
 - **Conduct of Wartime Inspection**
 - **Standardized Evaluation Criteria**





Status of AF CW Conops Development

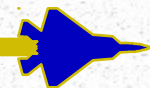


- **Completed Portions**
 - **Large Frame Aircraft Decontamination**
 - Being Included in 5027
 - AMC Updating Their Plan
 - **NEO in a CW Environment**
 - Submitted as Tab in CONPLAN 5060





Status of AF CW Conops Development



- **Completed Portions**
 - **Status Reporting**
 - **SORTS Proposal for Corona Fall**
 - **Chemical Detection**
 - **Complete Listing of Capabilities/Vulnerabilities**
 - **Hazar**





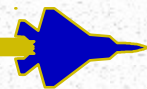
Status of AF CW Conops Development



- **Completed Portions**
 - **Chemical Plotting and Reporting**
 - **Screen by Screen Instructions**
 - **Precise Figures for Calculations**
 - **Decontamination**
 - **Standards for Operational Decontamination**
 - **IPE Requirements**
 - **Ability to Decontaminate**
 - **Reuse Versus One-Time Use Matrices**



Challenges to Effective Implementation



- **Changing Traditional Mindsets**
 - **“Don’t Confuse Me With Science; This Isn’t the Way We’ve Done It!”**
- **Desire for “Zero Casualty” War**
 - **Risk Assessment Key**
- **Extensive Training Requirements**
 - **“One Answer Fits All” Not Available**
 - **Readiness Manpower Shortages**



Challenges to Effective Implementation



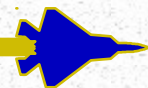
- **Lack of Adequate Detection Systems**
 - Forces “Reverse Engineering”
- **Program Emphasis**
 - “Nothing Will Happen While I’m on Shift”
- **Bureaucracy Associated w/Publication**
 - Deconfliction of Documents



Summary



- **Timing for Greatest Advancements in Field is NOW**
- **Training is Key**
 - **NBC Defense Personnel**
 - **Base Populace**
 - **Key Leadership**
- **Commander's Emphasis & Knowledge is Most Important Aspect of Program**



QUESTIONS?

